

Serial No. 09/909,229

Filed: December 30, 2004

REMARKS

Claims 1-35 are pending in the present application. Independent Claims 1 and 11 and dependent claim 18 have been amended to further clarify the claimed invention. In addition Claim 5 has been amended as requested, and dependent Claims 3-10 and 12-16 were amended to maintain antecedent basis with Claims 1 and 11, respectively. Applicant respectfully requests reconsideration based on the amendments and the following remarks.

Allowable Subject Matter

Applicant thanks the Examiner for the indication that claims 17 and 18 would be allowable if rewritten in independent form.

Telephone Interview

Applicant thanks the Examiner for the courtesies extended during the telephonic interview of September 1, 2005 in which Independent Claims 1, 11, 19 and 25 were discussed. In addition, Applicant's admitted prior art, U.S. Patent No. 4,961,188 to Lau, and U.S. Patent No. 6,327,273 to Van der Putten et al. were also discussed.

Claim Objections

Claim 1 and 5 stand as objected to. Claim 1 has been objected to for the limitation of "converting the source information." In the office action it has been asserted that the limitation should actually be "converting the received digital information." Applicant respectfully traverses this assertion since it is the source information that is sample rate converted. Step a) of Claim 1 specifically describes processing source information at a first rate to generate digital information. Thus, it is the source information processed at the first rate that is sample rate converted in step d) of Claim 1. Claim 1 does not limit the digital information to the source information, and thus, the digital information may include information that is not sample rate converted. In fact, as described in Claim 3, a counter value (CV(m)) is transmitted as part of the digital information. Thus, Applicant respectfully requests withdrawal of the objection to Claim 1.

Serial No. 09/909,229

Filed: December 30, 2004

Claims 5 and 13 have been amended to correct scrivener's errors. The amendments return Claims 5 and 13 to the condition of original Claims 5 and 13. Accordingly, Claims 5 and 13 are just as broad as original Claims 5 and 13. Only Claim 5 was objected to in the office action mailed June 1, 2005 as including additional material, however, Claim 13 had the same additional material erroneously added to the Claim. Thus both Claims 5 and 13 have been amended to remove the objectionable material. In view of the amendments, Applicant respectfully request withdrawal of the objection to Claim 5.

Claim Rejections – 35 USC §112 first paragraph

Claims 3, 11-24 and 34 stand objected to pursuant to 35 USC §112 first paragraph for failing to comply with the enablement requirement. In the office action mailed June 1, 2005, it has been asserted that the specification is not enabling with regard to the discussion of the source counter value and Figure 3. Specifically, it has been asserted that "it is not clear (in Figure 3) which source (sample rate) the counter value would represent." On page 17 lines 13-19, Applicant's specification indicates:

The source counter value (CV(m)) 46 is a digital representation of the frequency (sample rate) of the source sample rate (Fsi). *The value of the source counter value (CV(m)) 46 within each of the network frames 40 represents the source sample rate (Fsi) during generation of the source information represented by the first and second source information words (k and k') 42, 44.* The source counter value (CV(m)) 46 of one embodiment is an ascending counter value represented by, for example, one byte.

In addition, on page 17 lines 3-12 indicate:

The first and second source information words (k and k') 42, 44 represent a predetermined quantity of bits of the source information sampled at the source sample rate (Fsi). For example, where the source information is stereo audio source information, the first and second source information words (k and k') 42, 44 may each be four bytes representing the audio source information; two bytes representing the left channel, and two bytes representing the right channel. In another example where the source information is mono audio source information, the first and second source information words (k and k') 42, 44 may each be one byte representing the audio source information.

Serial No. 09/909,229

Filed: December 30, 2004

In Applicant's specification Figures 1 and 2 and pages 10-17 describe the configuration and operation of one embodiment of a source node. Specifically, on page 7 lines 22-24 and page 8 lines 1-3: "During operation, the source node 14 produces digital information 18 representative of source information. The digital information 18 is transmitted in network frames over the synchronous network 12 to the sink node 16." In addition, on page 14 lines 1-22, the specification describes:

The source information produced by the information generator 26 of the illustrated embodiment is in digital form. The source information is sampled at the source sample rate (F_{si}) produced by the source clock 28. In other embodiments, the information generator 26 may produce the source information in analog form and the source clock 28 may be omitted from the source 22. In these embodiments, the source information is subsequently converted to digital form by an analog-to-digital (A/D) converter operating at the source sample rate (F_{si}) and then input into the buffer 32.

The source clock 28 may be any time-keeping circuit or device capable of producing some form of timing signal at a frequency that is the source sample rate (F_{si}). Well-known time-keeping devices include a data strobe, an oscillating clock or any other form of timing device or mechanism.

The input stage 24 may be any circuit or device capable of processing the source information to produce and input digital information 18 to the synchronous network 12. In the illustrated embodiment, the input stage 24 includes an N-bit counter 30 and a buffer 32. The N-bit counter 30 is coupled with the source clock 28 and the buffer 32 as illustrated. The N-bit counter 30 operates in a well-known manner to count the frequency of the timing signals produced by the source clock 28. In addition, the N-bit counter 30 provides a source counter value (CV(m)) as an output signal to the buffer 32. An exemplary N-bit counter is the event counter mechanism in a Motorola DSP56362 digital signal processor.

Applicant is unable to find any description in Applicant's specification or in Figure 3 that "the figure [Figure 3] shows one counter value in the frame representing data from multiple sources" as asserted in the office action mailed June 1, 2005. In addition, elements 42 and 43 in Figure 3 of Applicant's specification are described in Applicant's specification as first and second source information words (k and k') that represent a predetermined quantity of bits of the source information sampled at the source sample rate (F_{si}). Applicant's specification clearly describes that the source counter value may be a digital representation of the frequency (sample rate) of the source sample rate (F_{si}). Also, Applicant's specification clearly describes that the source sample

Serial No. 09/909,229

Filed: December 30, 2004

rate (Fsi) may be the sample rate at which a source node samples source information. Based on the foregoing, Applicant's specification is enabling, and Applicant respectfully requests withdrawal of the 35 USC §112 first paragraph rejection of Claims 3, 11-24 and 34.

Claim Rejections – 35 USC §103(a)

Claims 1-2, 4-7, 9-10, 25-33 and 35 stand rejected pursuant to 35 USC §103(a) as being obvious in view of Applicant's Admitted Prior Art and US Patent No. 4,961,188 to Lau (hereafter "Lau"). In addition, Claims 3, 11-15, 19-21, 23-24 and 34 stand rejected pursuant to 35 USC §103(a) as being obvious in view of Applicant's Admitted Prior Art, Lau and US Patent No. 6,327,273 to Van der Putten (hereafter "Van der Putten"). Further, Claims 8, 16 and 22 stand rejected pursuant to 35 USC §103(a) as being obvious in view of Applicant's Admitted Prior Art, Lau and US Patent No. 6,009,109 to Binder (hereafter "Binder"). Applicant respectfully traverses these rejections since all of the features provided in Claims 2-10, 12-16 and 19-35 are not taught, suggested or disclosed by the cited prior art either alone or in combination. In addition, Claims 1 and 11 have been amended to include features that are not taught, suggested or disclosed by the cited prior art either alone or in combination. Thus, a *prima facie* case of obviousness has not been established.

Claims 1-10

The method of Claim 1 has been amended to provide clocking digital information without sample rate conversion into the synchronous network at a second rate, the second rate different than the first rate. In contrast, Applicant's Admitted Prior Art, namely page 2 lines 10-17 describes that prior art synchronous transmission requires sample rate conversion of the source information to the sample rate of a network master clock prior to transmission over the synchronous network. Clearly, processing information at a first rate to generate digital information and clocking said digital information without sample rate conversion into a synchronous network at a second rate that is different than the first rate, as provided in Claim 1, is not described in Applicant's specification as prior art. In addition, none of the cited prior art, either alone or in combination teaches or suggests sample rate converting the source information as a function of the first rate and the second rate as described in Claim 1.

Serial No. 09/909,229

Filed: December 30, 2004

Based on the amendments to Claim 1, all of the claim features disclosed by Claim 1 are not taught or suggested by Applicant's Admitted Prior Art or Lau either alone or in combination. Thus, a *prima facie* case of obviousness has not been established for Claim 1. In addition, Claims 2-10 depend from independent Claim 1 and therefore a *prima facie* case of obviousness has not been established for Claims 2-10 for at least the same reasons. Accordingly, Applicant respectfully requests the withdrawal of the 35 U.S.C. §103(a) rejection of Claims 1-10.

Claims 11-16

The method of Claim 11 has been amended to include the limitation of clocking the source information that is sampled at the source sample rate (F_{si}) into a network frame on the synchronous network at a network master clock rate (F_n) that is different from the source sample rate (F_{si}). In contrast, Applicant's Admitted Prior Art, namely page 2 lines 10-17 describes that prior art synchronous transmission requires sample rate conversion of the source information to the sample rate of a network master clock prior to transmission over the synchronous network. Clearly, Applicant's Admitted Prior Art does not teach or suggest clocking source information that is sampled at a source sample rate (F_{si}) that is different from a network master clock rate (F_n) into a network frame at the network master clock rate (F_n) as described in Claim 11.

In addition, none of cited prior art describes counting the frequency of the source sample rate (F_{si}) during sampling, and producing a source counter value ($CV(m)$) based on the frequency counted during sampling as described in amended Claim 11. In the office action it was asserted that Van der Putten teaches counting the frequency of a source sample rate (F_{si}) as described in Claim 11. Applicant respectfully traverses this assertion, since Van der Putten fails to teach or suggest counting the frequency of any sample rate. To the contrary, Van der Putten teaches a mechanism for determining a phase difference between a network clock (CLK2) of an ATM network and a network clock (CLK1) of a synchronous network. (Col. 4 lines 33-37, 62-66, Col. 5 lines 24-26, and Col. 6 lines 1-3) Clearly a network clock signal of an ATM network is completely different from a source sample rate (F_{si}) as described in Claim 11.

Serial No. 09/909,229

Filed: December 30, 2004

Even if one were to assume for purposes of discussion that the CLK2 signal of Van der Putten is somehow equivalent to Applicant's source sample rate (Fsi), which is clearly not the case, Van der Putten still teaches away from counting the frequency of a source sample rate (Fsi), since Van der Putten teaches that a transmit clock pulse (CLK1) is counted between the boundary of an ADSL superframe and a network clock pulse (CLK2) to measure a phase difference between the network clock (CLK2) and R (transformed CLK1). (Col. 5 lines 65-67, Col. 6 lines 1-3, Col. 4 lines 33-37) Clearly, a phase difference between two clocks as taught by Van der Putten teaches away from simply counting a frequency of a source sample rate (Fsi) as described in Claim 11. Van der Putten also teaches away by indicating "the frequency of the ATM network clock signal [CLK2] is well known (8 kHz), no information has to be transmitted between TX and RX." (Col. 5 lines 44-46) Clearly counting the frequency of the source sample rate (Fsi) to produce a source counter value (CV(m)) that is clocked into a network frame as described in Claim 11 is completely opposite of the teachings of Van der Putten.

Accordingly, all of the claim features disclosed by amended Claim 11 are not taught or suggested by Applicant's Admitted Prior Art, Lau, or Van der Putten either alone or in combination. Thus, a *prima facie* case of obviousness has not been established for Claim 11. In addition, Claims 12-16 depend from independent Claim 11 and therefore a *prima facie* case of obviousness has not been established for Claims 12-16 for at least the same reasons. Thus, Applicant respectfully requests the withdrawal of the 35 U.S.C. §103(a) rejection of Claims 11-16.

Claims 19-24

In the office action, it has been asserted that Van der Putten teaches counting the frequency of a network master clock rate (Fn) to produce a network counter value (NCV). Applicant respectfully traverses this assertion since neither Applicant's Prior Art nor Van der Putten teach counting the frequency of a network master clock rate (Fn) as described in Claim 19. To the contrary, as previously discussed, Van der Putten is concerned with a phase difference between two different clock signals, not producing a network counter value (NCV) as described in Claim 19. Thus, Van der Putten teaches away from counting a frequency, and instead teaches that "the

Serial No. 09/909,229

Filed: December 30, 2004

frequency of the ATM network clock signal [CLK2] is well known (8 kHz), no information has to be transmitted between TX and RX." (Col. 5 lines 44-46) In addition, determination of the phase difference of the clocks as taught by Van der Putten occurs at the source prior to transmission, thus extracting a source counter value (CV(m)) from digital information transmitted over a synchronous network and sample rate converting source information as a function of the network counter value (NCV) and the source counter value (CV(m)) as described in Claim 19 is also not taught or suggested.

Van der Putten also teaches away from sample rate conversion of source information as a function of the network counter value (NCV) and the source counter value (CV(m)), as described in Claim 19, since the entire purpose of the teachings in Van der Putten is simply to make an ATM timing reference signal be transparently transported over a segment of an ADSL network so that the ATM timing reference signal will appear at the exit of the segment of the ADSL network unaffected by transmission through the ADSL network. (Col. 1 lines 34-41) Clearly, the teachings of Van der Putten have nothing in common with sample rate conversion of source information as described in Claim 19 and actually teach away from such activity. Since Van der Putten has nothing to do with sample rate conversion, it follows that Van der Putten cannot possible teach, suggest or disclose a source counter value (CV(m)) representing the sample rate of source information, or sample rate converting source information as a function of a network counter value (NCV) and the source counter value (CV(m)) as further described in Claim 19.

In the office action, it has apparently been asserted that Lau teaches sample rate converting source information as a function of a network counter value and a source counter value. To the contrary, Lau is concerned with inputting information into a buffer at the source and reading information out of a buffer at the sink at the same clock rate "fs", which is a service input frequency rate. (Col. 4 lines 26-30, Col. 6 lines 7-10) The rate at which information is input to, and read from, a buffer is clearly not a sample rate of source information as described in Claim 19. It follows that Lau is not sample rate converting source information as described in Claim 19, but rather teaches how to input and read data from buffers at the same rate. In addition, in the office action, it is asserted Lau teaches transporting a source sample rate from a

Serial No. 09/909,229

Filed: December 30, 2004

source to a sink. However, Lau fails to teach or suggest extracting a source counter value (CV(m)) from digital information as described in Claim 19 and instead teaches that some of the transmitted cells include a cell flagging bit to indicate that a source buffer is depleted (Col. 5 lines 14-21). Lau actually teaches away from transmitting any kind of counter value by instead teaching that the frequency at which flagged cells appear at the destination node is used to determine the clock rate "fs". (Col. 5 lines 56-62) As is readily apparent, the intent, purpose and operation of Lau is so different from the invention described in Claim 19 that comparison is difficult.

Applicant respectfully asserts that all of the claim features disclosed by Claim 19 are not taught or suggested by Applicant's Admitted Prior Art, Lau, or Van der Putten either alone or in combination. Thus, a *prima facie* case of obviousness has not been established for Claim 19. In addition, Claims 20-24 depend from independent Claim 19 and therefore a *prima facie* case of obviousness has not been established for Claims 20-24 for at least the same reasons. Accordingly, Applicant respectfully requests the withdrawal of the 35 U.S.C. §103(a) rejection of Claims 19-24.

Claims 25-35

Claim 25 describes a synchronous network and a source node operable to generate digital information that comprises source information sampled at a first rate. Claim 25 also describes that the digital information is clocked into the synchronous network at the second rate absent sample rate conversion.

In contrast, neither Applicant's Admitted Prior Art, nor Lau teaches, suggests or discloses digital information sampled at a first rate that is clocked into a synchronous network at a second rate absent sample rate conversion as described in Claim 25. Thus, each and every claim feature included in Claim 25 has not been taught, suggested or disclosed by Applicant's Admitted Prior Art or Lau and a *prima facie* case of obviousness has not been established. In addition, a *prima facie* case of obviousness has not been established for Claims 25-35, which depend from independent Claim 25, for at least the same reasons. Accordingly, Applicant respectfully requests the withdrawal of the 35 U.S.C. §103(a) rejection of Claims 25-35.

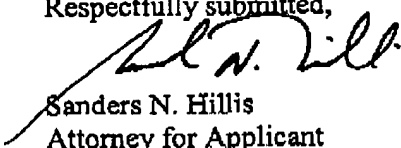
Serial No. 09/909,229

Filed: December 30, 2004

Conclusion

With this amendment and response, Applicant believes that the present pending claims of this application are allowable and respectfully requests the Examiner to issue a Notice of Allowance for this application. Should the Examiner deem a telephone conference to be beneficial in expediting allowance/examination of this application, the Examiner is invited to call the undersigned attorney at the telephone number listed below.

Respectfully submitted,



Sanders N. Hillis
Attorney for Applicant
Attorney Reg. No. 45,712

BRINKS HOFER GILSON & LIONE
Customer No. 29074
Telephone: 317-636-0886
Facsimile: 317-634-6701